

REMARKS

I. Prosecution History

The application as originally filed contained 74 claims. The pending claims 75-87 were presented to the Examiner in a preliminary amendment dated August 26, 1999. Applicants submitted a Supplemental Amendment on November 18, 1999. The Applicants received a communication mailed January 28, 2000 which indicated that all claims were allowable. However, due to a potential interference, *ex parte* prosecution was suspended. *Ex parte* prosecution was suspended until issuance of the present Office Action.

II. Explanation of Amendments

A marked up version of the changes made to the claims can be found in Appendix A hereto.

Applicants have requested amendment of the title of the invention to a more descriptive title which is more indicative of the claimed invention.

In paragraph 3 of the Office Action (Paper No. 17), the Examiner rejected claims 76, 78, 80, 82-83, and 87 alleging that these claims were anticipated under 35 U.S.C. § 102(e) by Klein *et al.*, U.S. Patent Number 6,372,453 (hereafter Klein *et al.*). In response, the Applicants have requested amendments to the claims intended to remove the allegedly anticipated subject matter. Specifically, and solely for purposes of expediting prosecution and without prejudice to the Applicants' right to seek broader claims in a continuing application, the Applicants have requested amendments to claims 75-77, 79, 84, and 86 to distinguish their claimed invention from the disclosure of the cited document and cancelled claim 85 without prejudice. Applicants respectfully request that the amendments be entered to place the case in condition for allowance. The amended claims recite sequences which are neither disclosed nor suggested by the cited document. Therefore, the Applicants respectfully request that the rejection under § 102 (e) be withdrawn.

The Applicants do not intend by these or any other amendments to abandon the subject matter of any claim as originally filed or later presented, and reserves the right to pursue such subject matter in continuing applications. Accordingly, Applicants hereby preserve the right to pursue the deleted subject matter in another application(s). The amendments have been made solely to expedite the prosecution of this application and issuance of the claims.

SUMMARY

In view of the amendments and remarks made herein, the Applicants believe amended claims 75-77, 79, 84, and 86 are in condition for allowance and kindly request notification of the same.

Applicants' representative would appreciate the opportunity to talk with the Examiner, in person or by telephone, to discuss any remaining questions and facilitate the prosecution and allowance of the application.

The Commissioner is hereby authorized to charge any fees which may be required by the accompanying papers, or credit any overpayment to Deposit Account No. 01-0519.

Respectfully submitted,



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APPENDIX A**VERSION WITH MARKINGS TO SHOW CHANGES MADE****In the Claims:**

75. **(Amended)** An isolated polynucleic acid molecule encoding a protein comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 38 and SEQ ID NO:42

- [(a) SEQ ID NO:36,
- (b) SEQ ID NO:38,
- (c) SEQ ID NO:40, and
- (d) SEQ ID NO:42].

76. **(Amended)** An isolated polynucleic acid molecule encoding a protein comprising an amino acid sequence selected from the group consisting of Cys⁴⁴ through Cys³⁸⁹ of SEQ ID NO:38 and Cys⁴¹ through Cys³³⁷ of SEQ ID NO:42[:

- (a) Cys⁸ through Cys⁴²¹ of SEQ ID NO:36,
- (b) Cys⁴⁴ through Cys³⁸⁹ of SEQ ID NO:38,
- (c) Cys³⁶ through Cys⁴¹⁷ of SEQ ID NO:40, and
- (d) Cys⁴¹ through Cys³³⁷ of SEQ ID NO:42],

wherein said protein is capable of binding to a glial cell line-derived neurotrophic factor or a neurturin neurotrophic factor such that the resulting protein/neurotrophic factor complex can bind to and induce phosphorylation of ret receptor protein tyrosine kinase.

77. **(Amended)** An isolated polynucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of:

- a) nucleotides of SEQ ID NO:3[5]7 encoding SEQ ID NO:3[6]8, and
- b) nucleotides of SEQ ID NO:[37]41 encoding SEQ ID NO:[38]42[,
- c) nucleotides of SEQ ID NO: 39 encoding SEQ ID NO:40, or
- d) nucleotides of SEQ ID NO: 41 encoding SEQ ID NO:42].

78. A vector comprising a polynucleic acid molecule of claim 75, 76 or 77 operatively linked to one or more operational elements effecting the amplification or

expression of said polynucleic acid molecule.

79. **(Amended)** A vector comprising a polynucleic acid molecule encoding a protein comprising the amino acid sequence of SEQ ID NOs:[36,]38[, 40] or 42 operatively linked to one or more operational elements effecting the amplification or expression of said polynucleic acid molecule, wherein said protein is capable of binding to a neurotrophic factor such that the resulting protein/neurotrophic factor complex can bind to and induce phosphorylation of ret receptor protein tyrosine kinase.

80. An isolated host cell comprising a vector of claim 78.

81. An isolated host cell comprising a vector of claim 79.

82. An isolated host cell comprising a vector of claim 78 wherein said host cell is selected from the group consisting of a mammalian cell and a bacterial cell.

83. A host cell of claim 82 which is a COS-7 cell or E. coli.

84. **(Amended)** A method for the production of a neurotrophic factor receptor protein, said method comprising the steps of:

(a) culturing an isolated host cell, containing a polynucleic acid molecule encoding a protein comprising an amino acid sequence selected from the group consisting of

- (i) [SEQ ID NO:36,
- (ii)]SEQ ID NO:38,[
- (iii) SEQ ID NO:40,] and [
- (iv)] (ii) SEQ ID NO:42,

under conditions suitable for the expression of said neurotrophic factor receptor protein by said host cell; and

(b) optionally, isolating said neurotrophic factor receptor protein expressed by said host cell.

85. **(Cancelled)**

86. **(Amended)** A method of claim 84, wherein said polynucleic acid molecule encodes a neurotrophic factor receptor protein comprising the amino acid sequence of SEQ ID NOs:[40]38 or 42.

87. **(Amended)** A method for the production of a neurotrophic factor receptor protein comprising the steps of:

(a) culturing an isolated host cell containing a polynucleic acid molecule of claim 75, 76 or 77 under conditions suitable for the expression of said neurotrophic factor receptor protein by said host cell; and

(b) optionally, isolating said neurotrophic factor receptor protein expressed by said host cell.